## REMARKS

After entry of the amendment, claims 33-58 are pending in the application. No issues of new matter should arise and entry of the amendment is respectfully requested. Reconsideration of the application, as amended, is also respectfully requested.

Claims 32 is rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,918,688 to Krause.

Claims 32 is rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,799,213 to Fitzgerald.

Claims 32 is rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,985,892 to Camarata.

Claims 32 is rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,785,488 to Reichert.

Claims 32 is rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,757,495 to Decker et al.

Claim 32 is rejected under the judicially created doctrine of double patenting.

In view of the cancellation of claim 32, the various rejections of claim 32 under 35 U.S.C. § 103(a), and the rejection of claim 32 under the judicially created doctrine of double patenting, are rendered moot. Accordingly, Applicant requests that the rejections of claim 32 under 35 U.S.C. § 103(a), and that the double patenting rejection, be withdrawn.

Applicant has reviewed the applied references, and submits that claims 33-58 are patentable over Krause, Fitzgerald, Camarata, Reichert and Decker, alone or in combination. For example, independent claim 33 is directed to "communication of information in a high band of frequencies above a telephone voice band of frequencies," and recites that the "second transceiver encodes a part of the information in said second signal within two or more separate non-overlapping sub-bands within the second range of frequencies." Applicant submits that none of the references teaches or suggests this combination of elements. Decker, for example, is not even directed to "communication of information in a high band of frequencies above a telephone voice band of frequencies," as recited in the claimed invention.

Applicant also submits that the applied references, alone or in combination, do not teach all elements recited in independent claim 53. For example, Applicant does not find teaching in any of the references with regard to a second device and third device that "include circuitry for transmitting information onto the two-wire telephone network in the same common range of

frequencies within the high band of frequencies without interfering with conduction of energy in the lower band," as recited in the claimed invention. Further, Applicant does not find teaching with regard to circuitry for transmitting information in the high band of frequencies that "accepts an information bearing signal and encodes a part of said information within two or more separate non-overlapping sub-bands within the common range of frequencies," as recited in the claimed invention.

## Conclusion

Applicant respectfully submits that, as described above, the cited prior art does not show or suggest the combination of features recited in the claims. Applicant does not concede that the cited prior art shows any of the elements recited in the claims. However, Applicant has provided specific examples of elements in the claims that are clearly not present in the cited prior art.

Applicant strongly emphasizes that one reviewing the prosecution history should not interpret any of the examples Applicant has described herein in connection with distinguishing over the prior art as limiting to those specific features in isolation. Rather, Applicant asserts that it is the combination of elements recited in each of the claims, when each claim is interpreted as a whole, that is patentable. Applicant has emphasized certain features in the claims as clearly not present in the claims, as discussed above. However, Applicant does not concede that other features in the claims are also not missing in the prior art. Rather, for the sake of simplicity, Applicant is providing examples of why each of the claims described above are distinguishable over the cited prior art.

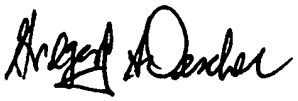
Consequently, issuance of a Notice of Allowance is respectfully requested.

**Authorization**

The Commissioner is hereby authorized to charge any additional fees which may be required for this Amendment, or credit any overpayment to deposit account no. 08-0219.

In the event that an additional petition for an extension of time is required (beyond what is authorized by the Petition for Extension of Time submitted herewith), the Commissioner is requested to grant another petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to deposit account no. 08-0219.

Respectfully submitted,



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## Appendix 1 – Newly Added Claims

33. A system for bi-directional communication of information in a high band of frequencies above a telephone voice band of frequencies over a two-wire telephone network used to carry telephone voice signals in the telephone voice band between a first telephone equipment and a second telephone equipment coupled to the two-wire telephone network comprising:

a first transceiver coupled to the two-wire telephone network including: circuitry for accepting a first signal, circuitry for transmitting onto the two-wire telephone network in a first range of frequencies in the high frequency band a first transmitted signal that encodes control information in the first signal, and a high pass filter for connecting to said network while blocking energy in the telephone voice band;

a second transceiver coupled to the two-wire telephone network including: circuitry for receiving the first transmitted signal from the two-wire telephone network, circuitry for recovering the control information from the received first transmitted signal, circuitry for providing the control information to a source of information, circuitry for accepting a second signal from the source of information, and circuitry for transmitting onto the two-wire telephone network in a second range of frequencies in the high frequency band a second transmitted signal that encodes information in the second signal;

a high pass filter for connecting to said network while blocking energy in the telephone voice band;

circuitry coupled between the second telephone equipment and the two-wire telephone network for preventing transmission of signals in the high frequency band from the two-wire telephone network to telephone equipment coupled to the two-wire telephone network;

wherein the first transceiver further includes circuitry for receiving the second transmitted signal from the two-wire telephone network, circuitry for recovering information in the second signal from the second transmitted signal, and circuitry for providing the recovered information to a destination of information;

wherein the first range of frequencies is located at lower frequencies and is smaller than the second range of frequencies; and

wherein said second transceiver encodes a part of the information in said second signal within two or more separate non-overlapping sub-bands within the second range of frequencies.

34. The system of claim 33 such wherein said information can be completely reconstructed without using the signal encoded into one of said sub-bands.

35. The system of claims 33 and 34 wherein one of said sub-bands lies above the frequency used by a common source of broadcast energy below 30 MHz, and one of said sub-bands lies below the frequency of said source.

36. The system of claim 35 wherein the two sub-bands lie sufficiently close to the frequency of said source that the gap between each sub-band and said source frequency is less than the sub-band width.

37. The system of claim 35 wherein the circuitry for receiving information in the high band of frequencies includes a notch filter centered at the frequency of said common source.

38. The system of claims 33, 34, 36, and 37 wherein the two-wire network includes one or more splits forming branches in the network, and wherein the second transceiver includes circuitry for processing said information-bearing signal for transmission to the first transceiver, wherein said circuitry is configured to reduce signal degradation caused by the branching of the network.

39. The system of claims 33, 34, 36, and 37 wherein the circuitry for accepting the second signal includes circuitry for accepting a video signal.

40. The system of 39 wherein the circuitry for transmitting the second transmitted signal includes circuitry for transmitting a compressed video signal.

41. The system of claim 33, 34, 36, and 37 wherein the circuitry for accepting the first signal includes circuitry for accepting a wireless signal that encodes the control information.

42. The system of claim 39 wherein the circuitry for accepting the first signal includes circuitry for accepting a wireless signal that encodes the control information.

43. The system claim 41 wherein the circuitry for accepting the wireless signal includes circuitry for receiving an infrared signal.

44. The system of claim 42 wherein the circuitry for accepting the wireless signal includes circuitry for receiving an infrared signal.

45. The system of claims 33, 34, 36, and 37 wherein the circuitry coupled between the second telephone equipment and the two-wire telephone network includes a low-pass filter coupled between the second telephone equipment and the two-wire telephone network such that the low-pass filter passes signals in the telephone voice band between the two-wire telephone network and the second telephone equipment and presents a high impedance at frequencies in the high frequency band to the two-wire telephone network.

46. The system of claims 33, 34, 36, and 37 wherein the system further comprises circuitry for coupling one or more telephone devices to a conductive path joining the first transceiver and the second transceiver on the two-wire telephone network at locations other than locations of the first transceiver or the second transceiver and for presenting high impedance in the high band of frequencies to said telephone network.

47. The system of claims 33, 34, 36, and 37 wherein the two-wire telephone network includes a segment that forms a branch on a conductive path joining the first transceiver and the second transceiver and wherein the second transceiver further includes circuitry for processing the second signal to form the second transmitted signal to mitigate effects resulting from the branch on the conductive path.

48. The system of claims 33, 34, 36, and 37 wherein the first transceiver further includes coupling circuitry coupled to the two-wire telephone network, to a first signal path for passing the first transmitted signal to the two-wire telephone network, and to a second signal path for passing the second transmitted signal from the two-wire telephone network, wherein the coupling circuitry matches impedance characteristics of the first and the second signal paths and the two-wire telephone network and wherein the coupling circuitry includes circuitry for preventing signals in the second range of frequencies from passing over the first signal path.

49. The system of claim 39 wherein the circuitry coupled between the second telephone equipment and the two-wire telephone network includes a low-pass filter coupled between the second telephone equipment and the two-wire telephone network such that the low-pass filter passes signals in the telephone voice band between the two-wire telephone network and the second telephone equipment and presents a high impedance at frequencies in the high frequency band to the two-wire telephone network.

50. The system of claim 39 wherein the system further comprises circuitry for coupling one or more telephone devices to a conductive path joining the first transceiver and the second transceiver on the two-wire telephone network at locations other than locations of the first transceiver or the second transceiver and for presenting high impedance in the high band of frequencies to ~~said~~ telephone network.

51. The system of claim 39 wherein the two-wire telephone network includes a segment that forms a branch on a conductive path joining the first transceiver and the second transceiver and wherein the second transceiver further includes circuitry for processing the second signal to form the second transmitted signal to mitigate effects resulting from the branch on the conductive path.

52. The system of claim 39 wherein the first transceiver further includes coupling circuitry coupled to the two-wire telephone network, to a first signal path for passing the first transmitted signal to the two-wire telephone network, and to a second signal path for passing the second transmitted signal from the two-wire telephone network, wherein the coupling circuitry matches impedance characteristics of the first and the second signal paths and the two-wire telephone network and wherein the coupling circuitry includes circuitry for preventing signals in the second range of frequencies from passing over the first signal path.

53. A system for communication in a high band of frequencies over a two-wire network forming two conductive paths between devices coupled to said network and used to carry electrical energy in a lower band of frequencies located above 30 Hz, said system comprising:

a plurality of devices for communicating in the high band of frequencies coupled at separated points to a conductive path of the two-wire network, including a first device, a second device, and a third device;

the first device includes circuitry for receiving information transmitted over the two-wire telephone network in the high band of frequencies;

the second device and third device include circuitry for transmitting information onto the two-wire telephone network in the same common range of frequencies within the high band of frequencies without substantially interfering with conduction of energy in the lower band; and

the system comprises a mechanism whereby either the second or the third device, but not both, passes information to the first device over the two-wire network,

wherein the circuitry for transmitting information in the high band of frequencies accepts an information bearing signal and encodes a part of said information within two or more separate non-overlapping sub-bands within the common range of frequencies.

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54. The system of claim 53 such that said information can be completely reconstructed without using the signal encoded into one of said sub-bands.

55. The system of claims 53 and 54 wherein one of said sub-bands lies above the frequency used by a common source of broadcast energy, and one of said sub-bands lies below the frequency of said source.

56. The system of claim 55 wherein the two sub-bands lie sufficiently close to the frequency of said source that the gap between each sub-band and said source frequency is less than the sub-band width.

57. The system of claim 56 wherein the circuitry for receiving information in the high band of frequencies includes a notch filter centered at a frequency used by a said common source of broadcast energy.

58. The system of claims 53, 54, 55, and 57 wherein the two-wire network includes one or more splits forming branches in the network, and wherein the circuitry for transmitting information in the high band of frequencies includes circuitry for processing said information-bearing signal for transmission to the first device, wherein said circuitry is configured to reduce signal degradation caused by the branching of the network.